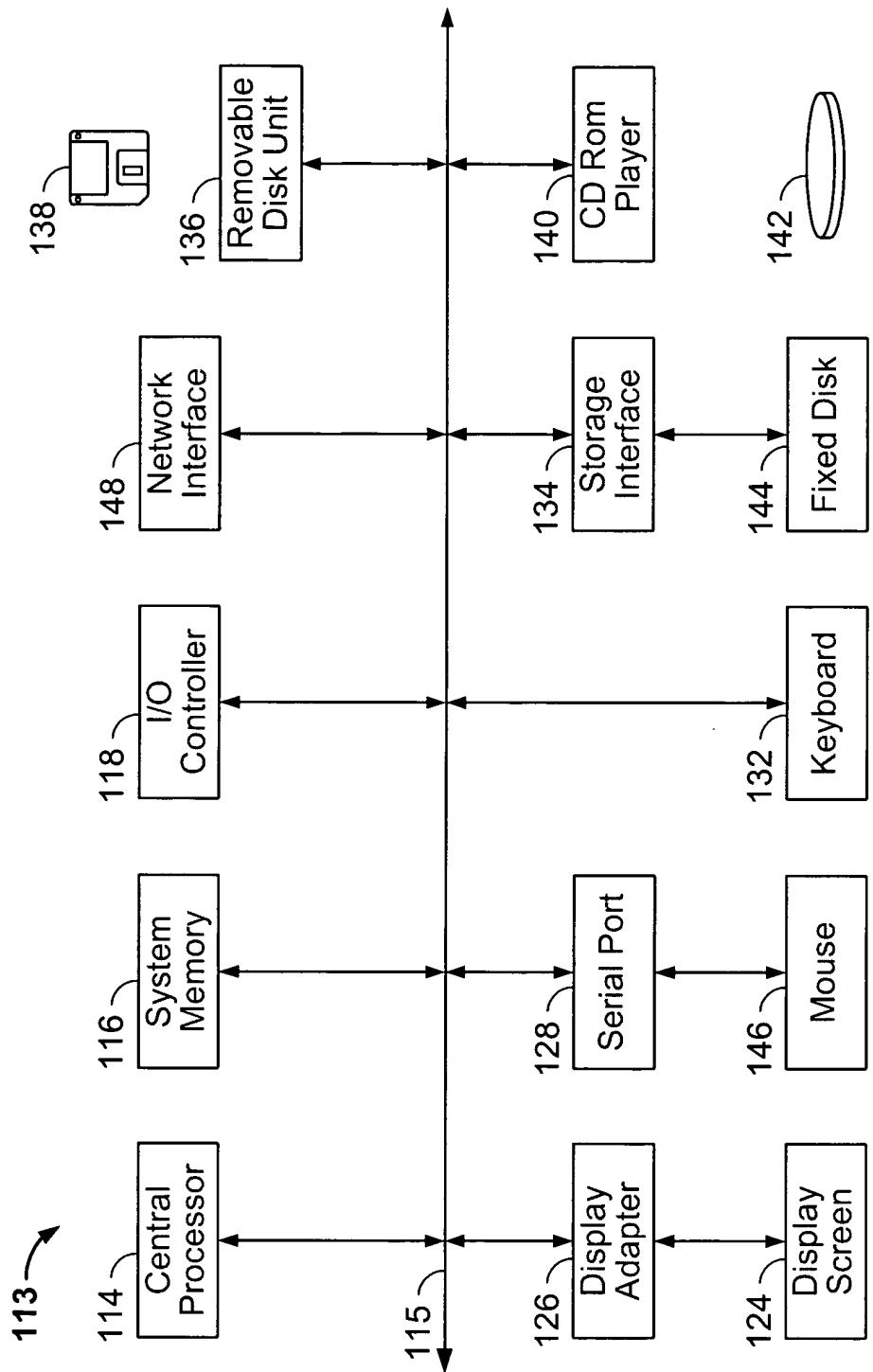
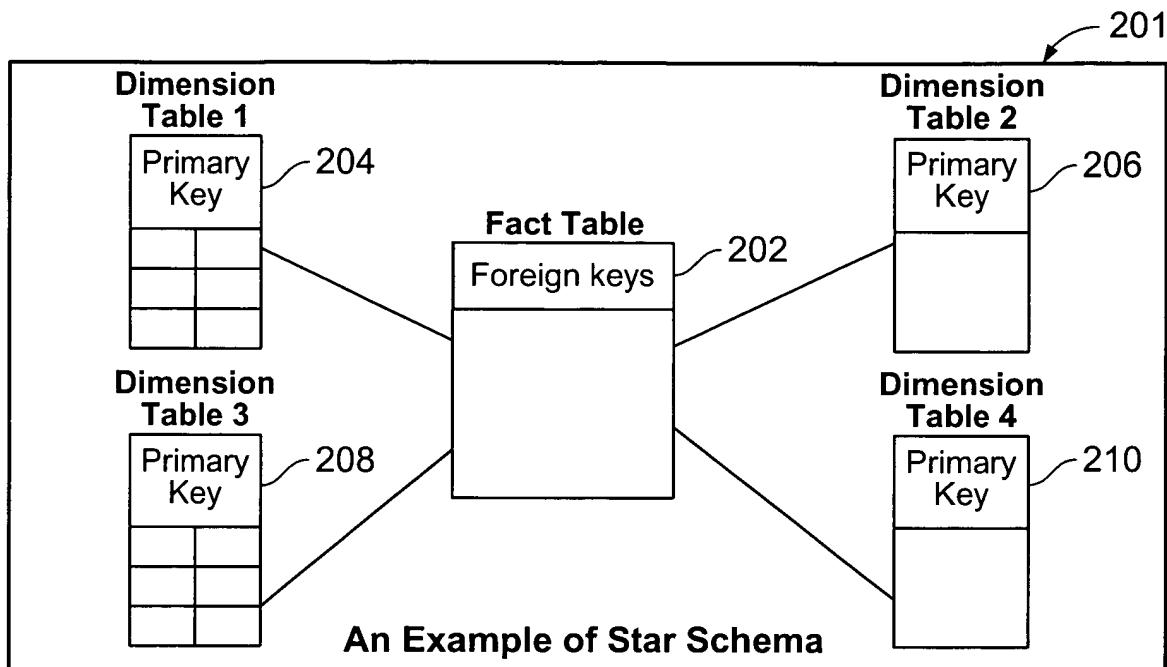


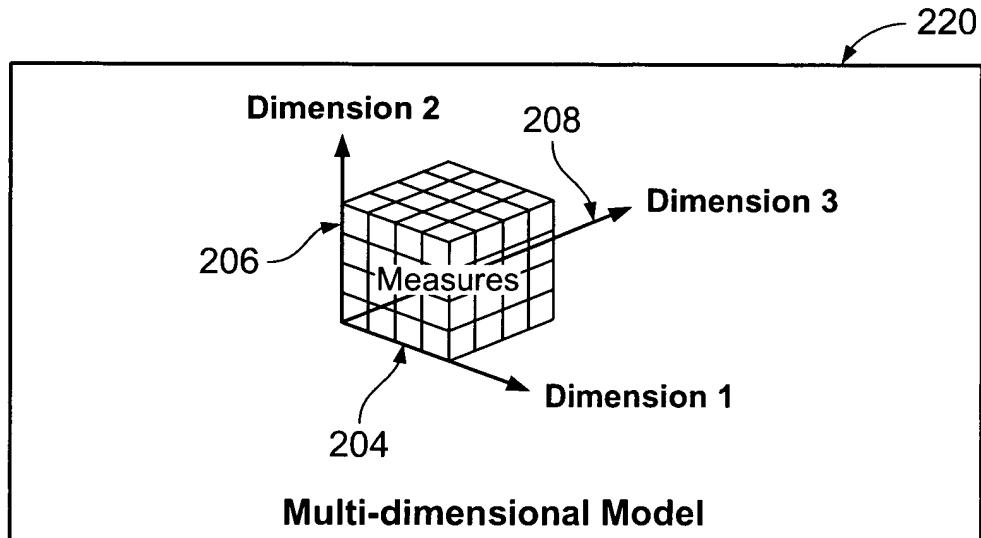
FIG. 1A



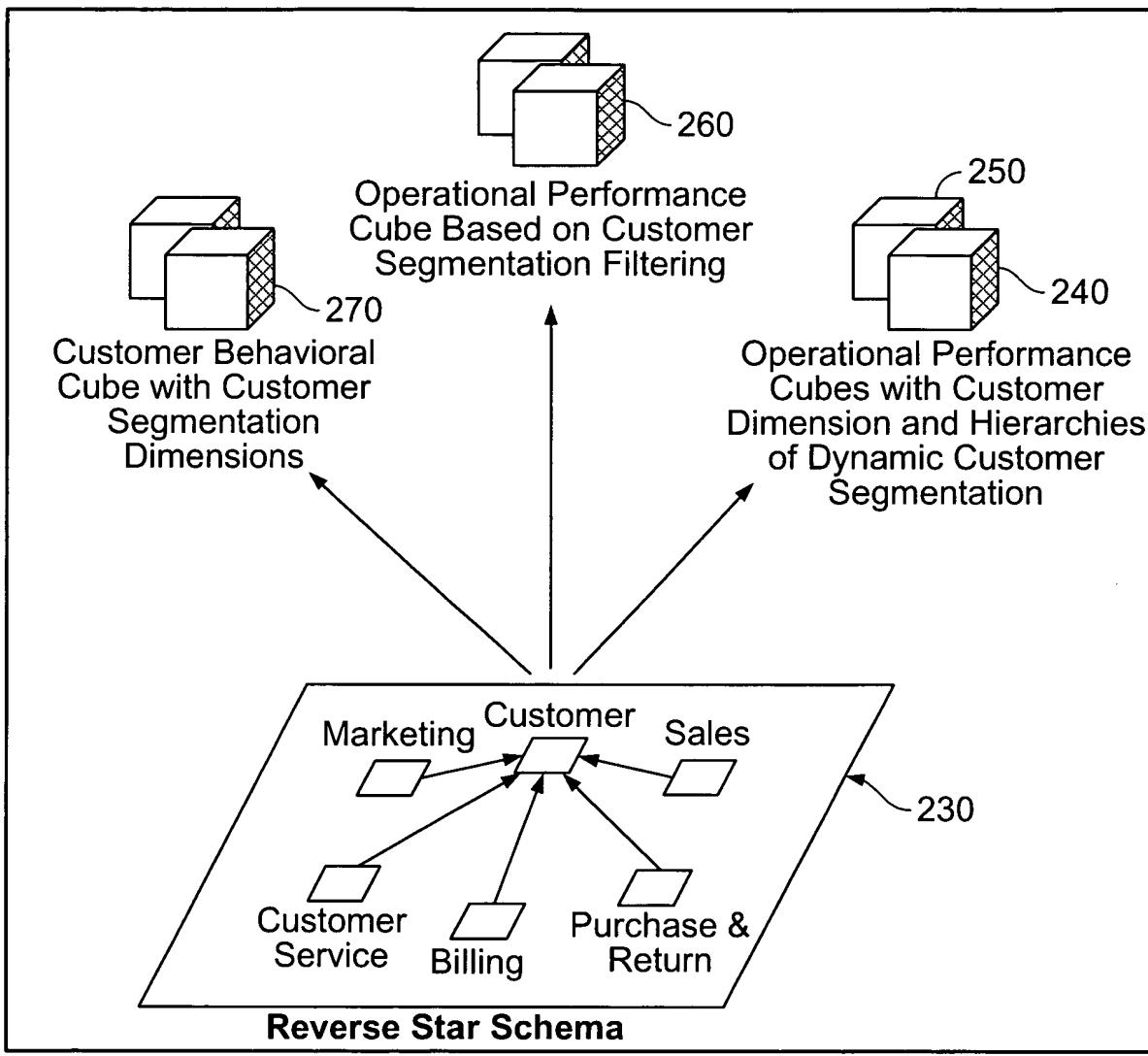
**FIG. 1B**



**FIG. 2A**

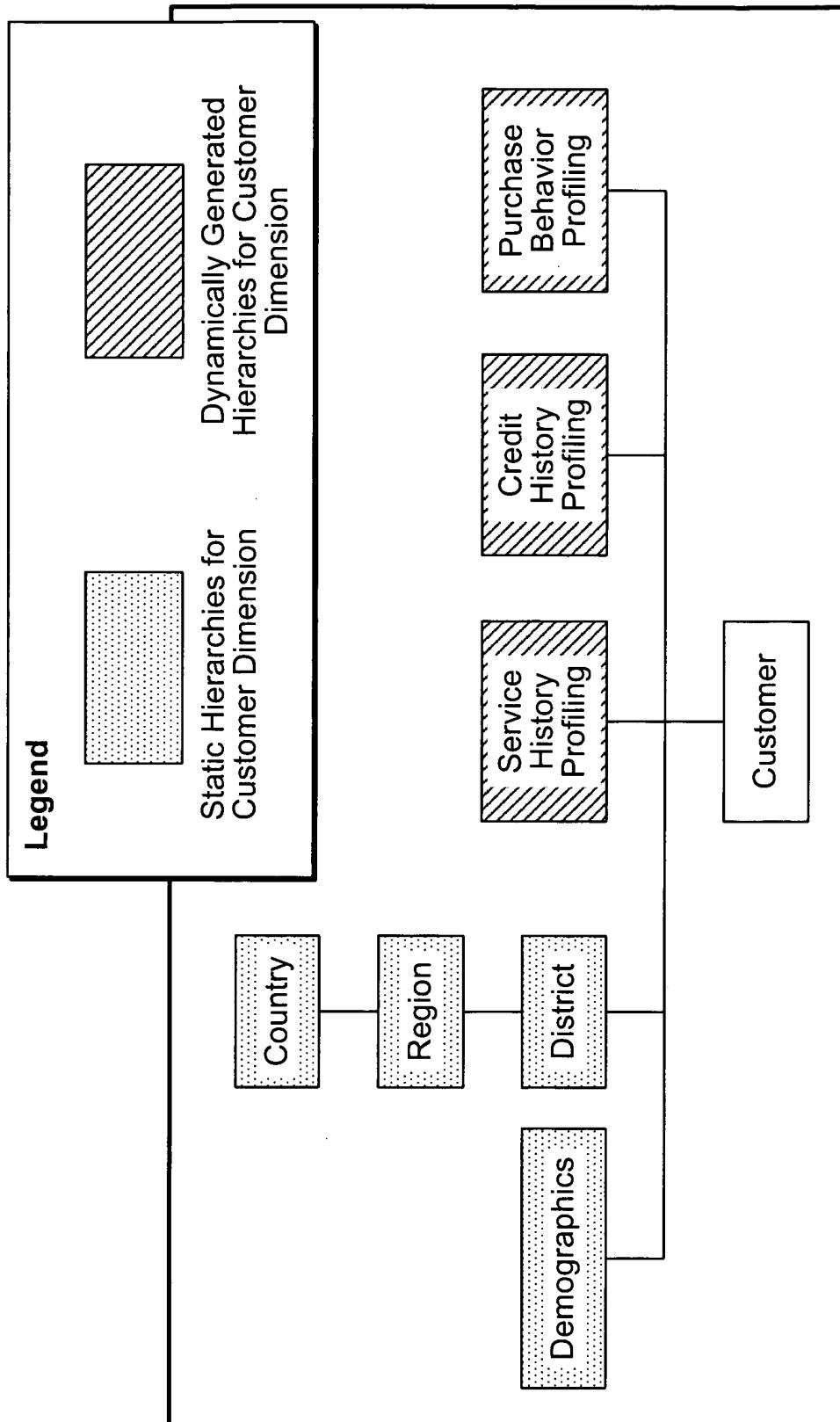


**FIG. 2B**



**FIG. 2C**

**FIG. 2D**



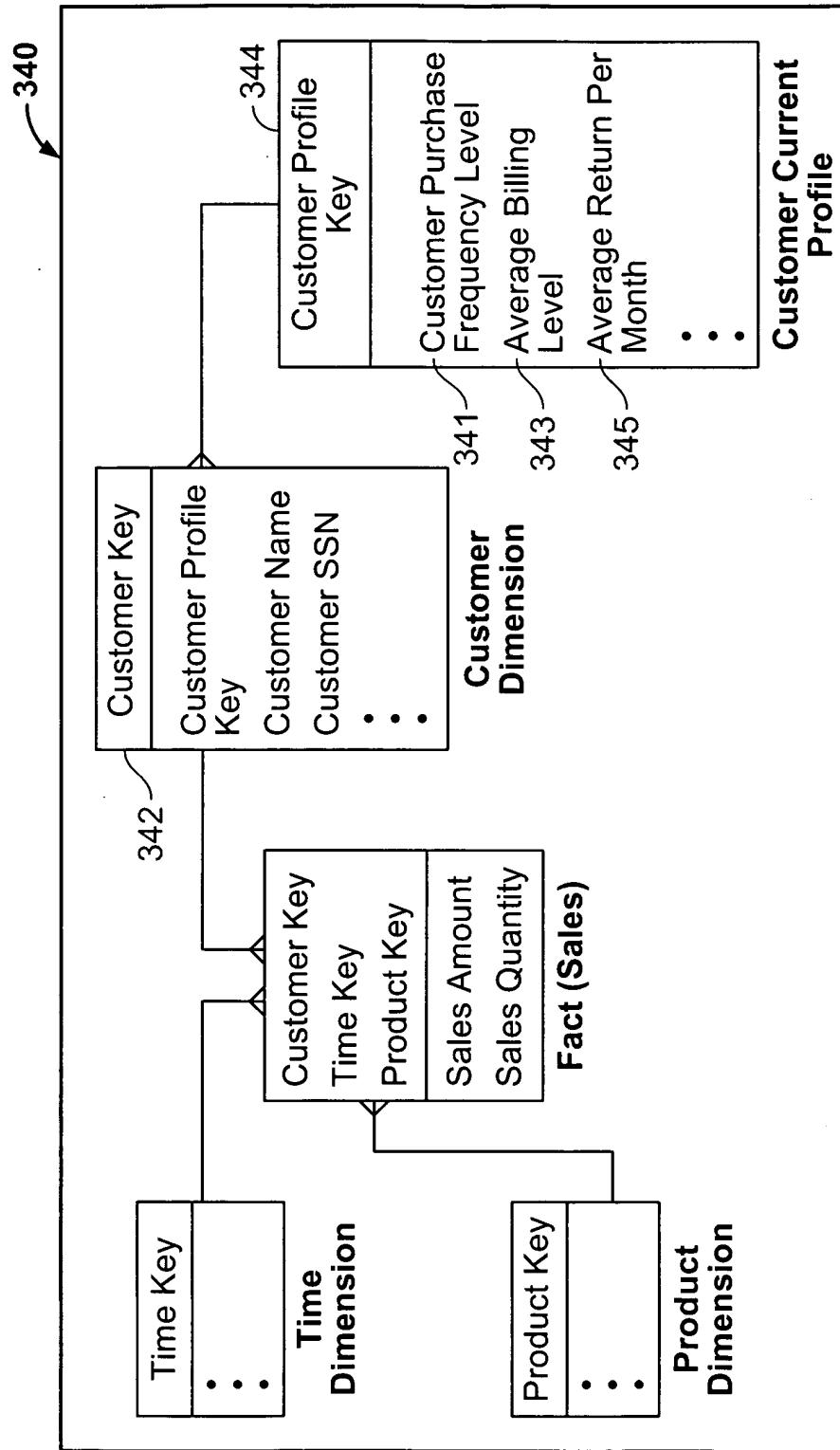
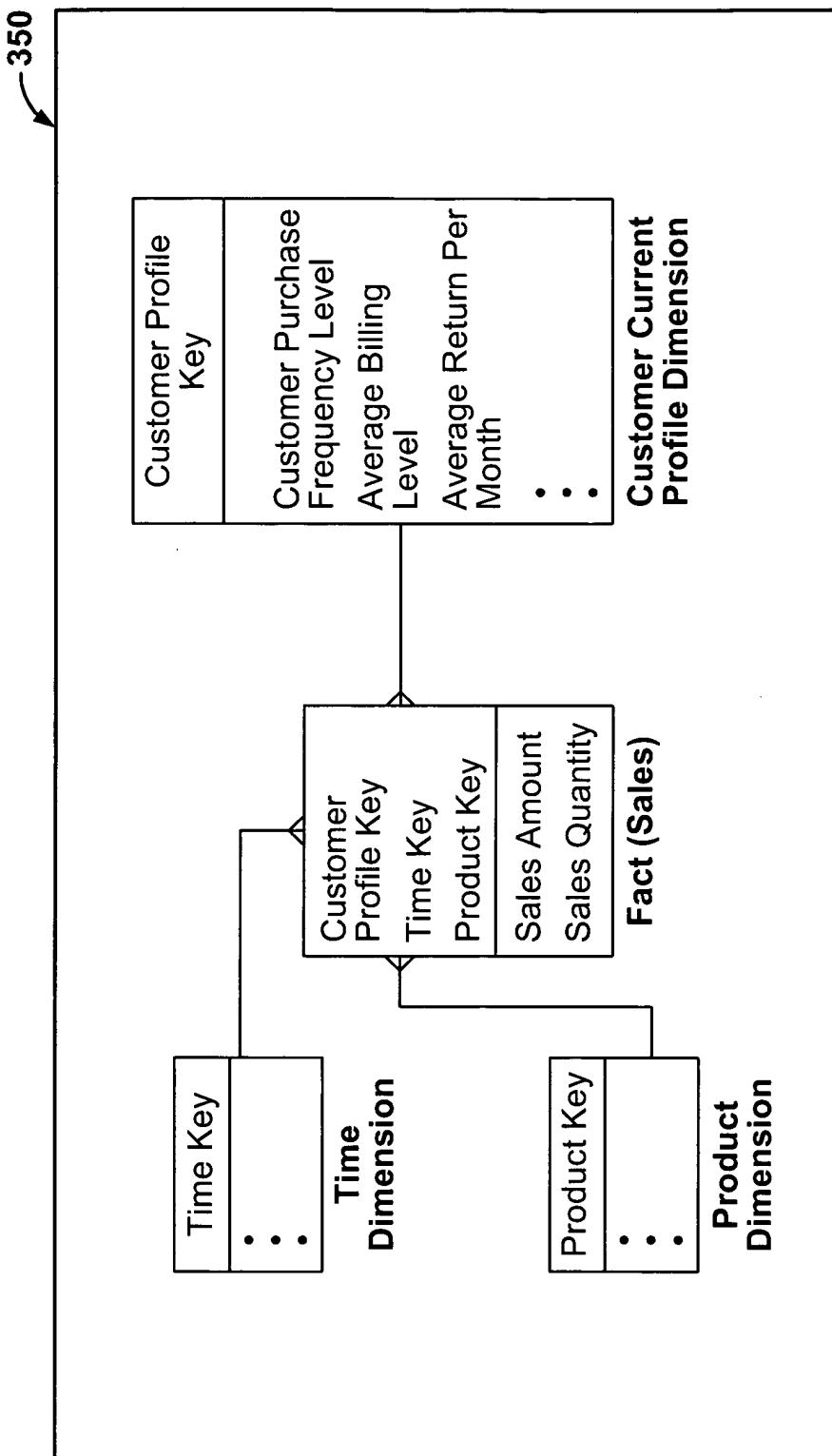


FIG. 3A



**FIG. 3B**

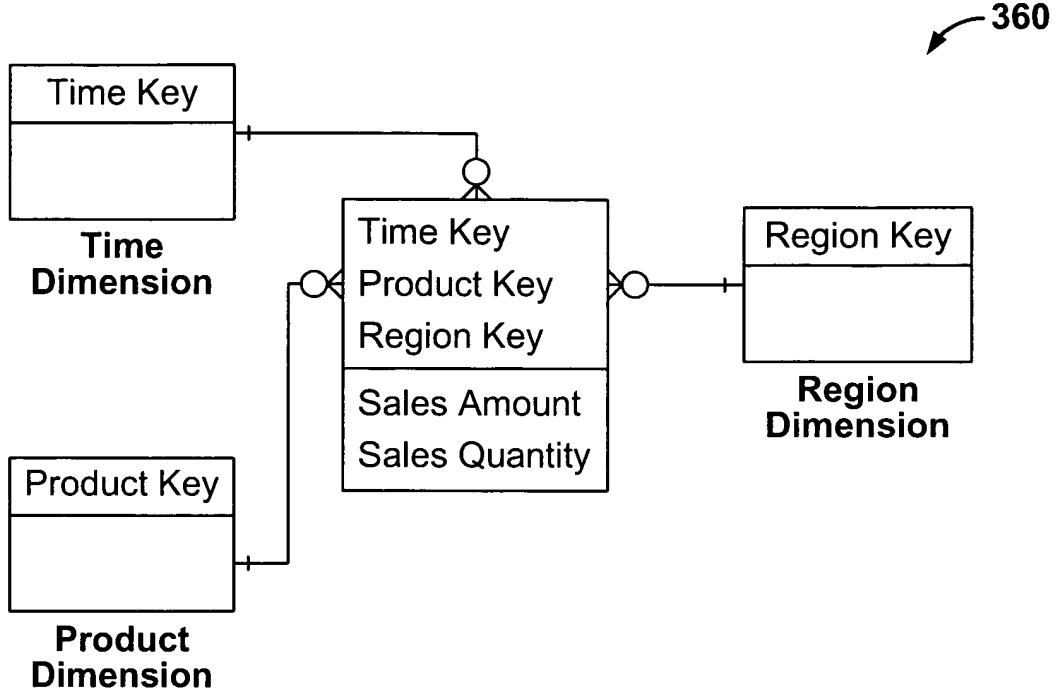


FIG. 3C

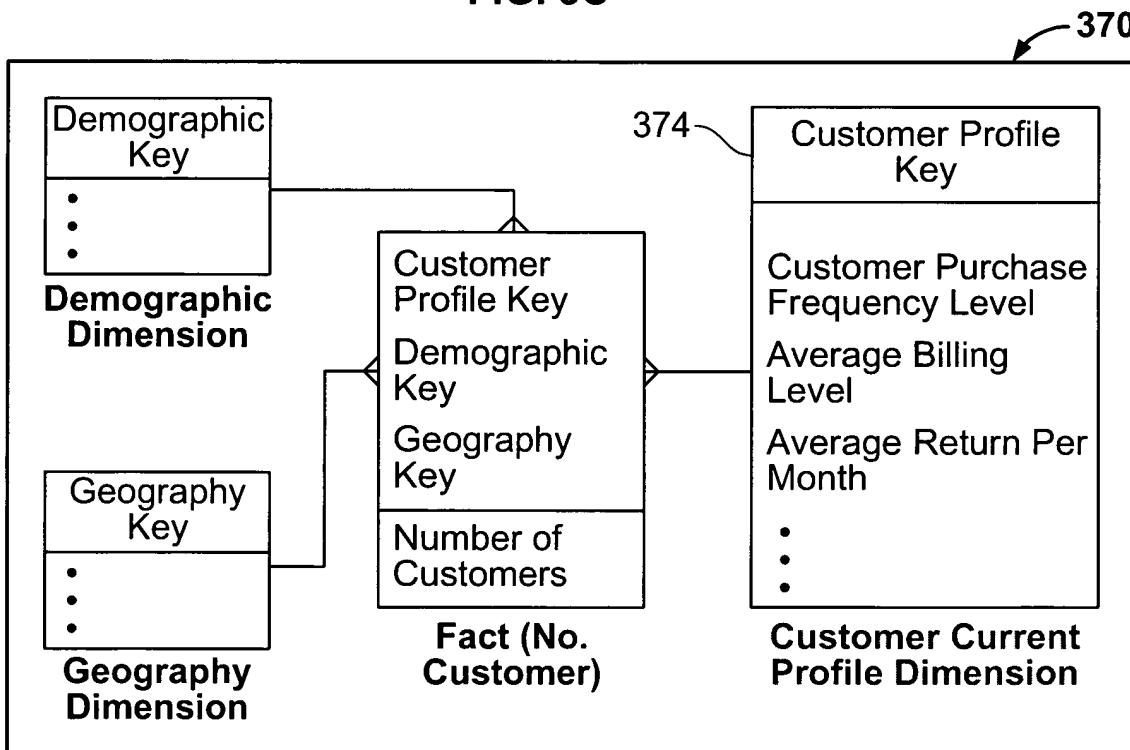
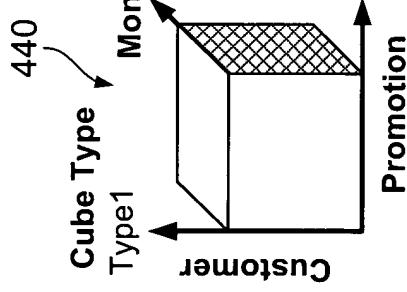


FIG. 3D

Ex1 : Description	
Dimensions:	<ul style="list-style-type: none"> <li>Customer</li> <li>Time</li> <li>Promotion</li> </ul>
B-Measures:	<p>Elements:</p> <ul style="list-style-type: none"> <li>Customer Name</li> <li>Month</li> <li>Promotion</li> </ul> <p>Formula:</p> $\text{sum(purch\_amt)} / \text{count(trans)}$



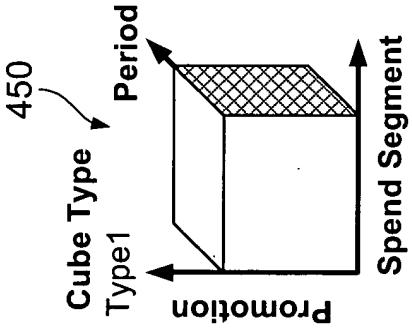
440  
Cube Type  
Type 1  
Month  
Promotion

Report Layout	
Jan-99	Avg. Spend Amt.
Name	ID
Miller	Promo 1
Jackson	Promo 2
Gellman	Promo 3
Clarion	
Blackman	
Sbiera	
<b>Subtotal Top 100</b>	
<b>Subtotal Rest</b>	More Months

FIG. 4A

Dimensions:	<ul style="list-style-type: none"> <li>Spend Segment</li> <li>Period</li> <li>Promotion</li> </ul>
B-Measures:	<p>Avg. Spend Amount</p> <p>Formula:  <math display="block">\text{sum(purch\_amt)} / \text{count(trans)}</math></p>

### Ex2 : Description



450

Cube Type

Type1

Period

Promotion	Avg. Spend Amt.		
	Gold	Silver	Copper
Christmas			
Valentines			
Spring			
Summer			
Fall			
Thanksgiving			
More Months			

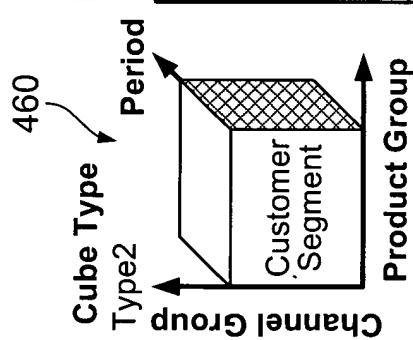
450

Report Layout

415

FIG. 4B

Ex3 : Description		
Dimensions:	421	Elements: • Channel Group • Product Group • Period
• Channel • Product • Time		Formula: $\text{sum(purch\_amt)}$ Filtered $/ \text{sum(purch\_amt)}$
B-Measures: Sales Contribution		Filter Elements: Customer Segment



Report Layout			
Product Group	On-line	Sales Contribution	Catalog
Books			
Magazines			
Cds			
Video Games			
Cassettes			
Gifts			
<b>Data Set: Customer Segment = 1</b>			
			More Months

FIG. 4C

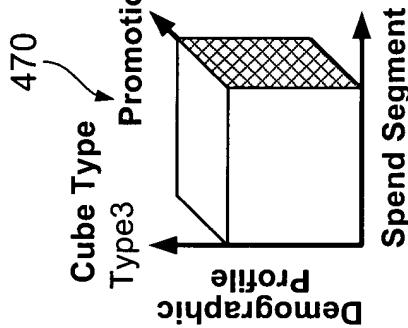
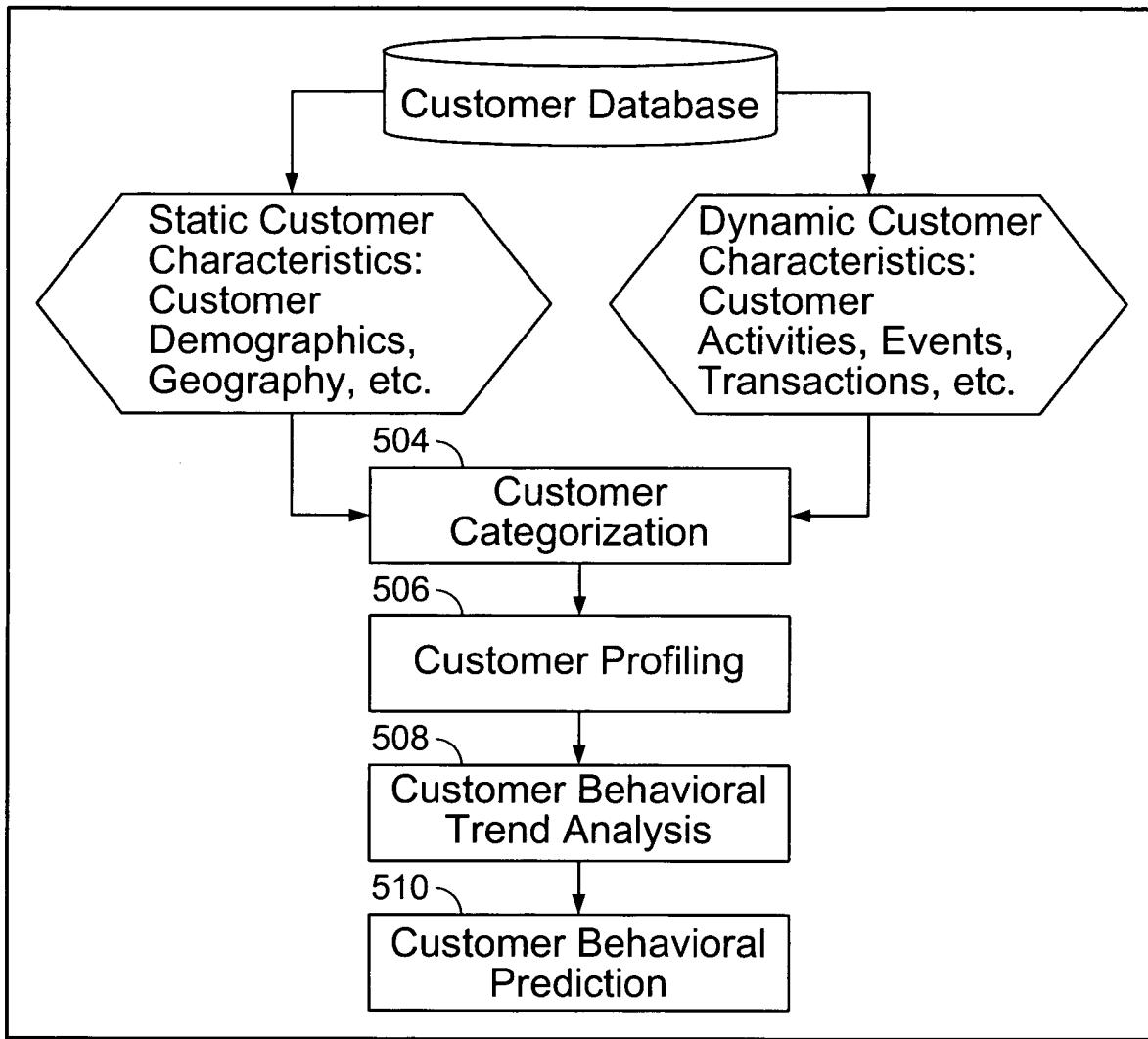
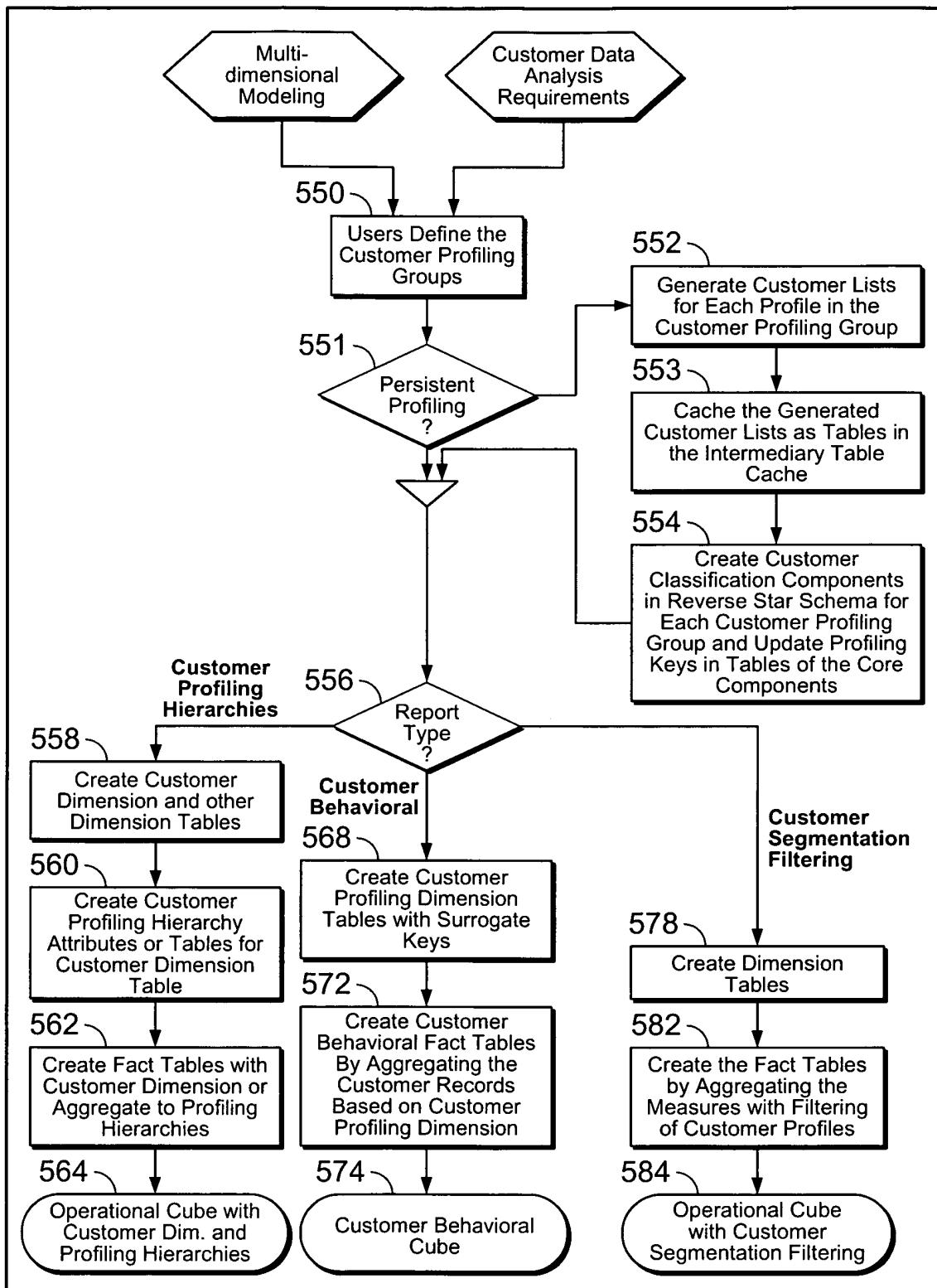
Ex4 : Description		Report Layout																																									
Dimensions:	<ul style="list-style-type: none"> <li>• Customer</li> <li>• Promotion</li> </ul>	470 Cube Type Type3																																									
B-Measures:	<p>Elements:</p> <ul style="list-style-type: none"> <li>• Spend Segment</li> <li>• Demographic Profile</li> <li>• Promotion</li> </ul> <p>Formula:  <math>\text{count}(\text{cus\_key})</math></p>	431	<table border="1"> <thead> <tr> <th colspan="2">Christmas Promotion</th> <th colspan="3">Count of Customers</th> </tr> <tr> <th>Age Group</th> <th>Gender</th> <th>Gold</th> <th>Silver</th> <th>Copper</th> </tr> </thead> <tbody> <tr> <td>Young</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Young</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Adult</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Adult</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Senior</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Senior</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>More Promotions</p>	Christmas Promotion		Count of Customers			Age Group	Gender	Gold	Silver	Copper	Young					Young					Adult					Adult					Senior					Senior				
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Age Group	Gender	Gold	Silver	Copper																																							
Young																																											
Young																																											
Adult																																											
Adult																																											
Senior																																											
Senior																																											

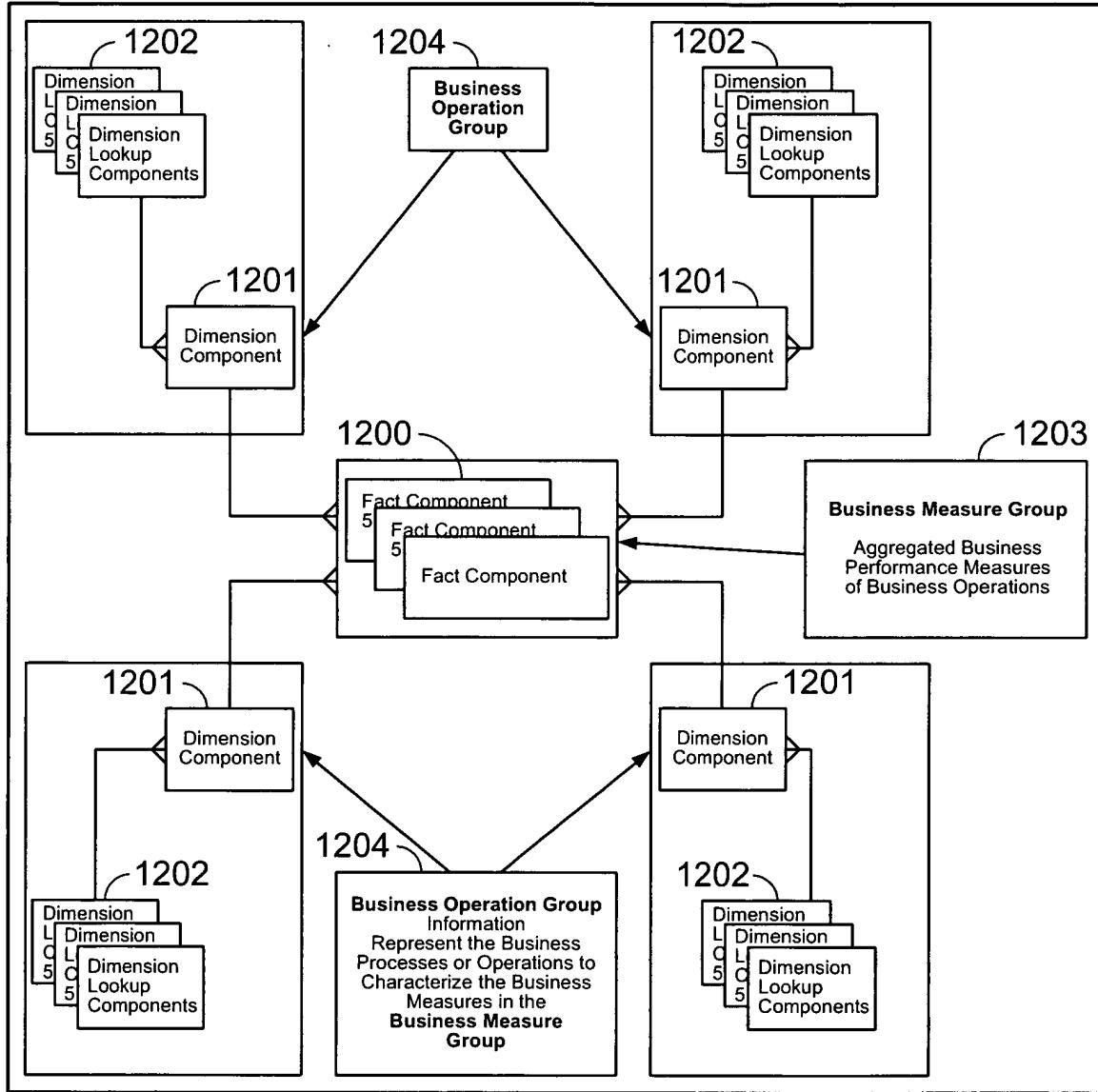
FIG. 4D



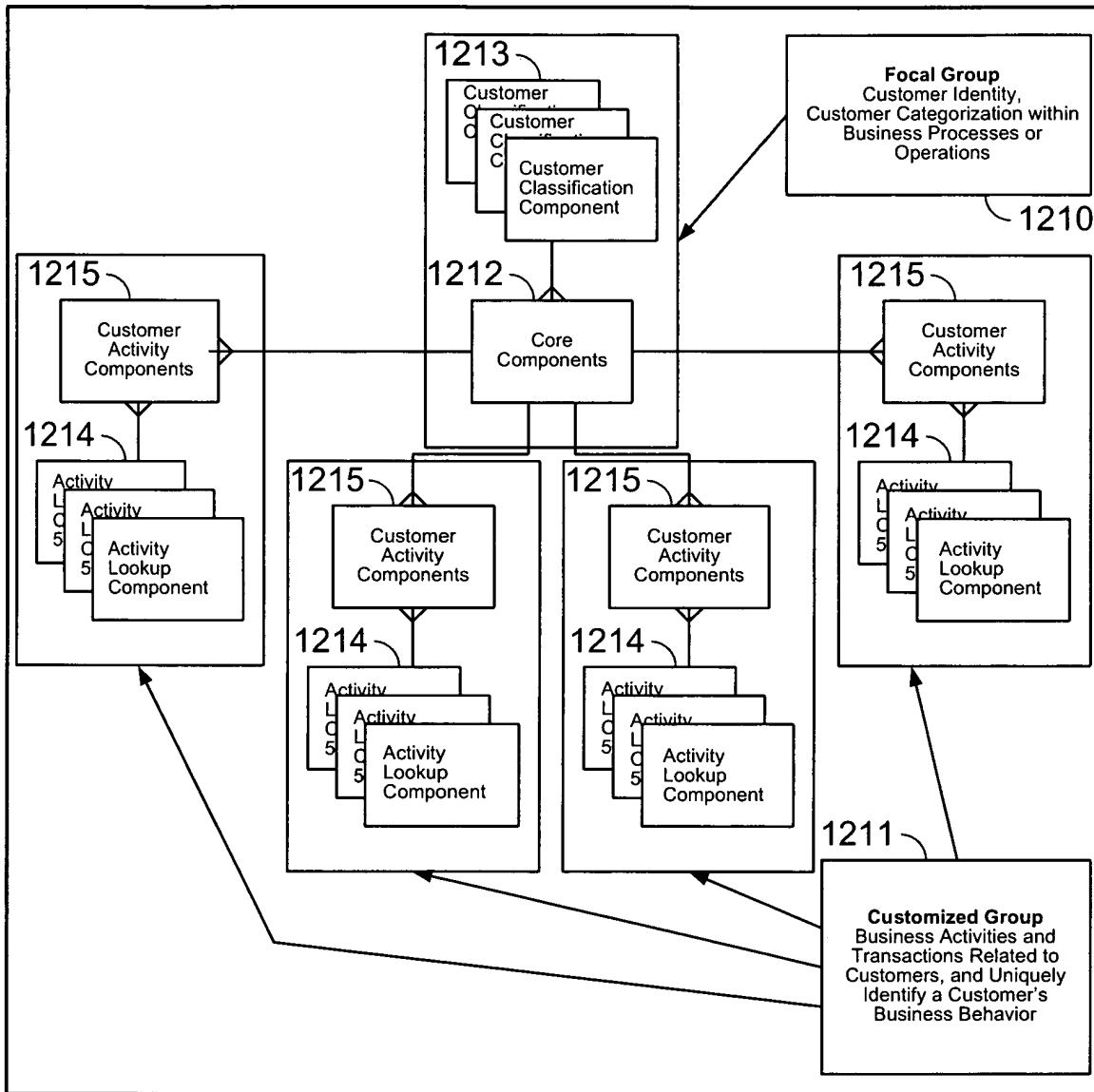
**FIG. 5A**



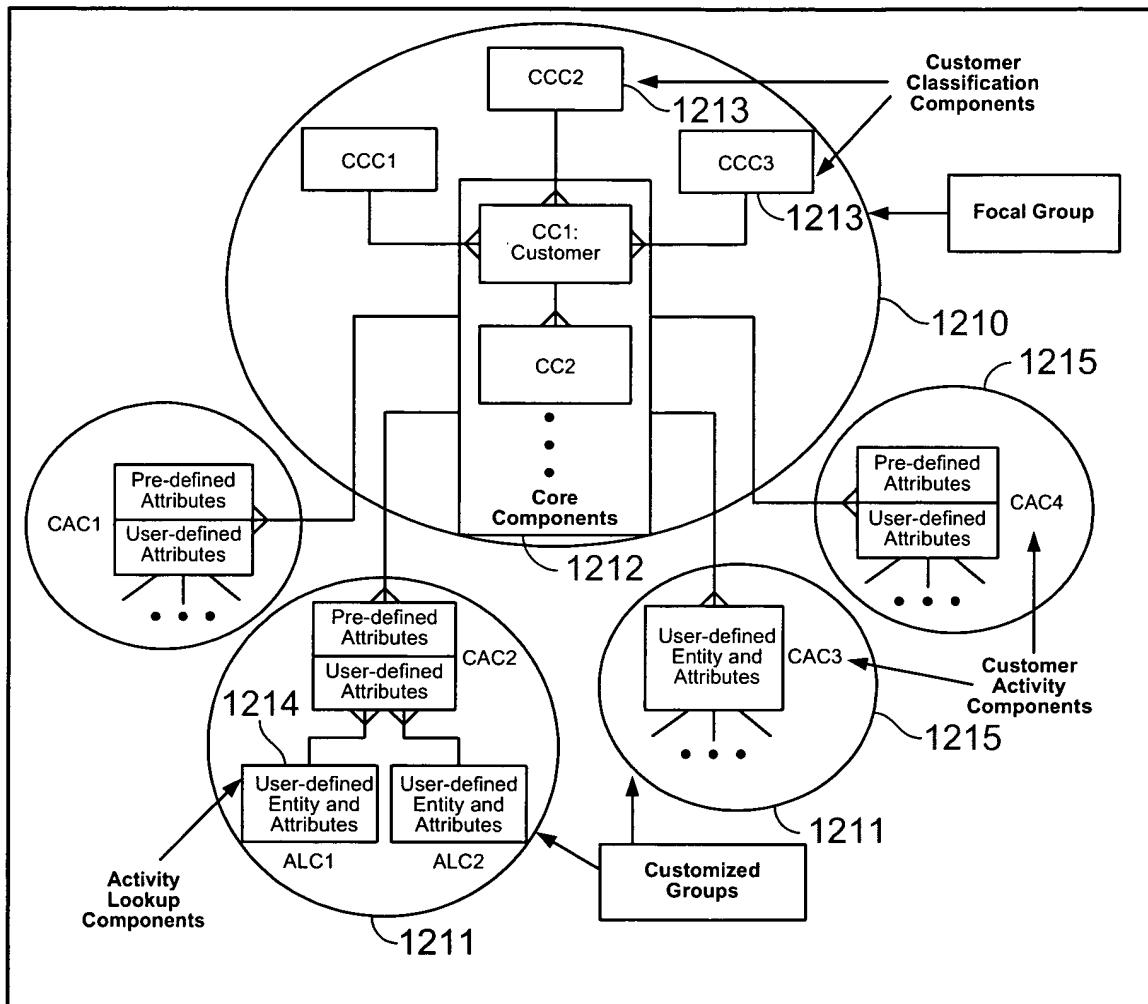
**FIG. 5B**



**FIG. 6A**



**FIG. 6B**



**FIG. 6C**

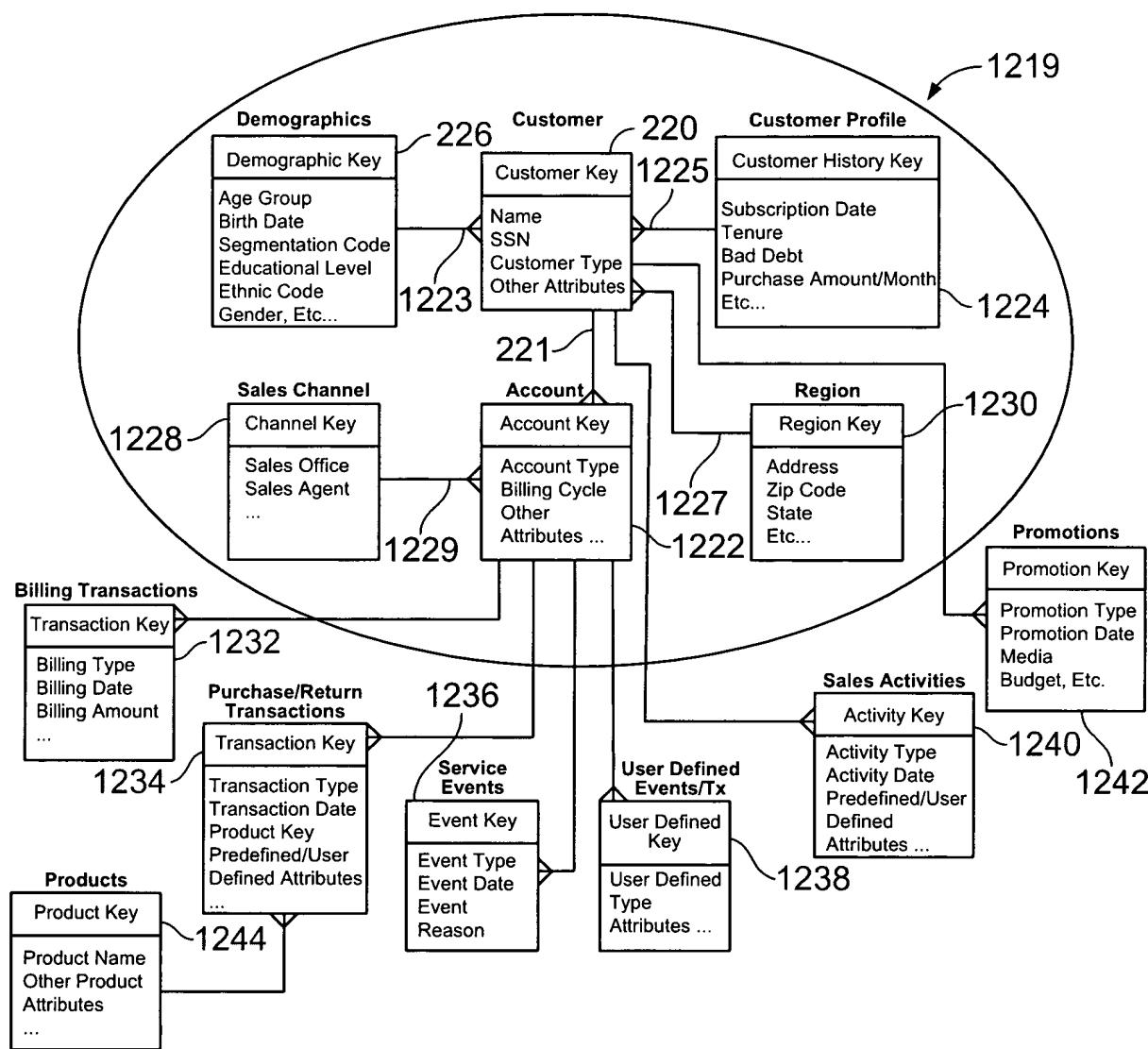


FIG. 6D